Remarks

This is in response to the Office Action mailed on August 19, 2002. Claims 1, 8, 12, 15, 19, 20, 21, 22, 24, and 27 are amended, support for which can be found at page 9, lines 15-20 of the present invention. Claims 1-27 remain pending. Reconsideration and allowance are respectfully requested.

I. Claim Rejections Under 35 U.S.C. § 102

In section 3 of the Office Action, claims 1-3, 7, 8, 12, 15, 17-24, 26, and 27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Butterfield, U.S. Patent No. 4,965,707. This rejection is respectfully traversed, to the extent it is maintained.

Claim 1 is directed to a fireplace and includes limitations representative of the other rejected claims. Claim 1 recites a support structure having an ember support surface, and a plurality of translucent artificial embers disposed upon the support surface. Claim 1 further recites the translucent artificial embers include fused silica particles. It is advantageous to use translucent artificial embers of fused silica because fused silica can withstand the high temperatures (e.g., fused silica can withstand temperatures of at least 3000 degrees Fahrenheit) sometimes generated in gas, electric, or solid-fuel burning fireplaces without breaking up or foaming. In addition, fused silica particles will not bind to the support structure during combustion, and create an aesthetically pleasing glow when illuminated. See page 9, lines 21-25 of the present invention.

In contrast, Butterfield discloses an apparatus for simulating flames, the apparatus including a means 8 for simulating a bed of fuel, the means preferably comprising pieces of colored glass. See column 3, lines 14-16 of Butterfield. The rejection states that the pieces of colored glass disclosed in Butterfield are equivalent to the fused silica particles recited by claim 1. This assertion is respectfully traversed.

Butterfield does not disclose or suggest using fused silica particles, but instead discloses pieces of colored glass. In addition, Butterfield discloses an apparatus for simulating flames, with the only source of heat in the apparatus being the lamp 11 (see Figure 1). The heat generated by the lamp 11 would clearly not approach the temperatures generated in a typical gas, electric, or solid-fuel fireplace. There is no suggestion that the glass disclosed by Butterfield would survive high temperatures. Further, because any heat generated by the lamp in the

Butterfield flame simulating apparatus would be negligible, Butterfield would have no motivation to provide a material such as fused silica particles to withstand high temperatures.

For at least these reasons, Butterfield fails to suggest using translucent artificial embers including fused silica particles, as recited by claim 1. Therefore, claim 1, as well as claims 2, 3, 7, and 8 that depend therefrom, should be allowable. Reconsideration and allowance are requested.

Claims 12, 15, 19, 21, 24, and 27, as well as claims 17, 18, 20, 22, 23, and 26 that depend therefrom, all recite translucent artificial embers including fused silica particles and should therefore be allowable for at least the same reasons as expressed with respect to claim 1 above. Reconsideration and allowance are respectfully requested.

II. Claim Rejections Under 35 U.S.C. § 103

In sections 5-10 of the Office Action, claims 4-6, 9-11, 13, 14, 16, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Butterfield in view of various references, including: Auer, U.S. Patent No. 1,692,021; White, GB 249,321; Busby et al., GB 2 072 832; Whittaker et al., U.S. Patent No. 4,726,351; Hess et al., U.S. Patent No. 5,642,580; and Rehberg, U.S. Patent No. 5,195,820. These rejections are respectfully traversed, to the extent they are maintained.

None of the cited references, alone or in combination, suggest using translucent artificial embers including fused silica particles as recited in independent claims 1, 12, 15, and 24. Claims 4-6, 9-11, 13, 14, 16, and 25 all depend from these independent claims and should therefore be allowable for at least the same reasons. Reconsideration and allowance are respectfully requested.

III. Conclusion

In view of the above amendments and remarks, claims 1-27 are now in condition for allowance. Reconsideration and allowance are respectfully requested. The Examiner is encouraged to contact the undersigned attorney with any questions regarding this application.

Respectfully submitted,
MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, MN 55402-0903
612.371.5271

Date: January 9, 2003

By: _____
Name: Matthew A. Doscotch
Reg. No. 48,957
MAD/RAK

MARKED UP VERSION TO SHOW CHANGES MADE

In the Claims

Please amend claims 1, 8, 12, 15, 19, 20, 21, 22, 24, and 27 as follows.

1. (Once Amended) A fireplace comprising:

an enclosure defining a chamber;

a support structure having an ember support surface, said support surface being disposed within the chamber;

a plurality of translucent artificial embers including fused silica particles, wherein the translucent artificial embers are disposed upon but separable from said support surface; and

a light source positioned to pass light through at least a portion of the support structure to illuminate the translucent artificial embers.

8. (Once Amended) The fireplace of claim 1, wherein the translucent artificial embers comprise fused silica particles configured to withstand temperatures of at least 3000 degrees Fahrenheit.

12. (Once Amended) A fireplace comprising:

a combustion chamber enclosure, wherein the combustion chamber enclosure includes a support structure, said support structure being configured to support a plurality of loosely separable and at least partially translucent artificial embers including fused silica particles; and

a light source arranged and configured relative to said support structure so as to illuminate said artificial embers when supported by said support structure.

15. (Once Amended) A fireplace comprising:

an enclosure, wherein the enclosure includes a support structure, said support structure being configured to support a plurality of loosely separable and at least partially translucent artificial embers including fused silica particles; and

a light source arranged and configured relative to said support structure so as to illuminate said artificial embers when supported by said support structure.

19. (Once Amended) An apparatus for electrically simulating glowing embers within an enclosure of a fireplace, the apparatus comprising:

a support structure configured to be insertable with the enclosure and defining an ember support bed for supportably holding a plurality of translucent artificial embers;

a plurality of translucent artificial embers including fused silica particles, configured to be loosely supported by said ember support bed; and

a light source arranged and configured to pass light through the ember support bed to illuminate the translucent artificial embers.

20. (Once Amended) The apparatus of claim 19, wherein the translucent artificial embers comprise fused silica particles configured to withstand temperatures of at least 3000 degrees Fahrenheit.

21. (Once Amended) An apparatus for electrically simulating glowing embers within a fireplace, the apparatus comprising:

an ember support bed;

a plurality of translucent artificial embers including fused silica particles, wherein the translucent artificial embers are individually arrangeable upon the ember support bed; and

a light source positioned to pass light through at least a portion of the ember support bed to illuminate the loose translucent artificial embers.

22. (Once Amended) The apparatus of claim 21, wherein the translucent artificial embers comprise fused silica particles configured to withstand temperatures of at least 3000 degrees Fahrenheit.

24. (Once Amended) A method for electrically simulating glowing embers within a fireplace, comprising:

providing an enclosure, wherein the enclosure defines a chamber;

disposing an ember support bed structure within the chamber;

arranging a plurality of translucent artificial embers including fused silica particles on said ember support bed structure;

providing a light source to produce a light beam; and

passing said light beam through at least a portion of the artificial embers to illuminate the translucent artificial embers.

27. (Once Amended) A method for electrically simulating glowing embers within a fireplace, comprising:

providing an enclosure, wherein the enclosure defines a chamber;

disposing an ember support bed structure within the chamber to support a plurality of loosely separable and at least partially translucent artificial embers including fused silica particles; and

providing a light source to produce and pass a light beam through at least a portion of the artificial embers to illuminate the translucent artificial embers.